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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/707,434	12/12/2003	Seth David Berger		1433
7590		02/23/2005	EXAMINER	
Seth David Berger		FETZNER, TIFFANY A		
36 Lawrence St		ART UNIT		
Watertown, MA 02472		PAPER NUMBER		
		2859		
DATE MAILED: 02/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.		Applicant(s)	
	10/707,434		BERGER, SETH DAVID	
	Examiner		Art Unit	
	Tiffany A. Fetzner		2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED First ACTION (Pro-Se Inventor)

Drawings

1. The drawings are objected to by the examiner because
 - A) Figures 1a, 1b, 2a, and 2b are not complete figures. The individual figures do not fit on a standard piece of "8 1/2" by 11 inch paper. They are in 44pt font
 - B) Some of the reference numbers are cut off or missing, some of the reference numbers cannot be read because the lines of the figures obscures them. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action **to avoid abandonment of the application**. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The official draftsperson has objected to the drawings. Note the changes required by the attached PTO-892 form (Notice of Official Draftsperson's Review).
3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of the examiner and Official draftsperson's objections noted above. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Specification

4. The disclosure received electronically is objected to because of the following informalities:

A) On **page 2** paragraph [0005] **replace** "Fig. 1" with "Figs. 1a and 1b" because there is no Fig. 1 in applicant's disclosure. The figures are identified as figures 1a, 1b, 2a, and 2b.

B) On **page 2** paragraph [0007] **replace** "Fig. 1" with "Figs. 1a and 1b" because there is no Fig. 1 in applicant's disclosure. The figures are identified as figures 1a, 1b, 2a, and 2b.

C) On **page 3** paragraph [0009] **replace** "Fig. 1" with "Figs. 1b" because only figure 1b shows " Δy ".

D) On **page 10** paragraph [0019] **replace** "Fig. 2" with "Figs. 2a and 2b" because there is no Fig. 2 in applicant's disclosure. The figures are identified as figures 1a, 1b, 2a, and 2b. Appropriate correction is required.

SUBSTITUTE SPECIFICATION REQUESTED SEE 37 CFR 1.52(A)

5. A substitute specification including claims is required pursuant to 37 CFR 1.125(a) and 37 CFR 1.52(a) because All papers which are to become a part of the permanent records of the Patent and Trademark Office must be legibly written either by a typewriter or mechanical printer in permanent dark ink or its equivalent in portrait orientation on flexible, strong, smooth, non-shiny, durable, and white paper. All of the application papers must be presented in a form having sufficient clarity and contrast between the paper and the writing thereon to permit the direct reproduction of readily legible copies in any number by use of photographic, electrostatic, photo-offset, and microfilming processes and electronic reproduction by use of digital imaging and optical character recognition. If the papers are not of the required quality, substitute typewritten or mechanically printed papers of suitable quality will be required.

See § 1.125 for filing substitute typewritten or mechanically printed papers constituting a substitute specification when required by the Office.

6. A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the original specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

7. Applicant should also file a new specification because the current specification is in 44+ point font with all equations reverse transposed (i.e. the equation itself is white with a rectangular black background). The examiner notes that applicant's electronic disclosure available to the examiner is 49 total pages 42 (spec pages) 4 (drawing pages) 2 (claim pages) and 1 abstract page.

Claim Objections

8. **Claims 2, 4,** are objected to because of the following informalities:

A) In **claim 2** line 2 insert "is" before "separated" to correct a grammatical error.

B) In **claim 4** line 1 insert "said" before "opposite" to correct a grammatical error.

Appropriate correction is required.

9. Applicant note that in "amending" (i.e. correcting) claims applicant must submit:

A) A complete list of all claims with all limitations present in the application;

B) Every claim must have an identifier following the claim number, **examples** below:

Claim 1 (original) An apparatus comprising ...

Claim 2 (amended) Said apparatus of claim 1 [{e4}] wherein:

said second region is separated from said first region by a planar

interface; and

said first and second regions being mirror images in said planar interface.

Claim 3 (original)

Claim 4 (amended)

Claim 10 (New) An apparatus comprising ...

Claim 11 (Canceled).

- C) Any additions to the claims need to be underlined, with respect to newly added claims, in new claims all text should be underlined.
- D) Any deletions should be enclosed in brackets with a single line strikethrough.
- E) Any canceled claims are just the claim number with the (canceled) identifier.
- F) Only a claim that was filed on the original filing date, without any changes (i.e. additions or deletions) is identified as (original).

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. **Claims 1-9** are rejected under **35 U.S.C. 102(b)** as being anticipated by **Frese et al.**, US patent 4,486,711 issued December 4th 1984

12. With respect to **Claim 1**, **Frese et al.**, teaches and shows "An apparatus" (i.e. a magnetic resonance gradient coil) [See abstract, and col. 3 line 14 through col. 6 line 68] "comprising: a current-carrying element" [See coil components 6, 7, 8, or 9 of figure 1] "with a first region carrying a first current;" [See current component(s) I of figure 1 indicated by the directional arrows and region "N3"] "a second region adjacent to said first region"; [See figure 1 and region "N2"] "said second region carrying a second current;" [See current –I of figure 1] "said second current differing from said first current where adjacent;" [See figure 1 and the teachings of the abstract, and col. 3 line 14 through col. 6 line 68] **Frese et al.**, also teaches "a magnetic resonance imaging machine" using the gradient coil apparatus/device." [See abstract, col. 1 line 6 through col. 6 line 68].

13. With respect to **Claim 2, Frese et al.**, shows that "said second region" (i.e. "N2") "is separated from said first region by a planar interface;" [See planar interface 17' of figure 1] "and said first and second regions being mirror images in said planar interface". [See figure 1] The same reasons for rejection, that apply to **claim 1** also apply to **claim 2** and need not be reiterated.

14. With respect to **Claim 3, Frese et al.**, teaches and shows "said first current has a first direction;" [See figure 1 the directional arrows of current I] "said second current has a second direction;" [See figure 1 the directional arrows of current -I] "and said second direction is opposite said first direction". [See figure 1] The same reasons for rejection, that apply to **claim 1** also apply to **claim 3** and need not be reiterated.

15. With respect to **Claim 4, Frese et al.**, shows from figure 1 that "an opposite of said second current being a mirror image of said first current in said planar interface". [See figure 1] The same reasons for rejection, which apply to claims 1, 2 also apply to **claim 4** and need not be reiterated.

16. With respect to **Claim 5, Frese et al.**, teaches from col. 1 line 7 through col. 6 line 68 and intrinsically shows from figure 1 that " said first region carries a first volume current density". Figure 1 also shows that "said first region has a first thickness;" and that "said first region carries a first current density, comprising said first volume current density integrated over said first thickness of said first region; and said first current density is constant over said first region". [See from col. 1 line 7 through col. 6 line 68; especially col. 5 line 48 through col. 6 line 68] The same reasons for rejection, that apply to **claims 1, 2, 4** also apply to **claim 5** and need not be reiterated.

17. With respect to **Claim 6, Frese et al.**, teaches and shows "a support surface". [See either component 9, or components 17' and 18' because components 17' and 18' support coil regions N3 and N1 of coils 6, 7, 8 and 9; as well as support gradient coil body 9 of figure 1.] The same reasons for rejection, that apply to **claim 1**, also apply to **claim 6** and need not be reiterated.

18. With respect to **Claim 7, Frese et al.**, shows "said first and second regions pass under" or over "and conform to said support surface". [See figure 1] The same reasons

for rejection, which apply to claims 1, 6 also apply to **claim 7** and need not be reiterated.

19. With respect to **Claim 8, Frese et al.**, shows "that said support surface" (i.e. components 17' or and 18') "is flat". [See figure 1] The same reasons for rejection, that apply to **claims 1, 6, 7** also apply to **claim 8** and need not be reiterated.

20. With respect to **Claim 9, Frese et al.**, shows "said current-carrying element has cross-section comprising an arc of a circle". [See figure 1] The same reasons for rejection, that apply to **claims 1, 6, 7, 8** also apply to **claim 9** and need not be reiterated.

21. **Claims 1-9** are rejected under **35 U.S.C. 102(b)** as being anticipated by **Su et al.**, US patent **6,493,572 B1** issued **December 10th 2002**. This patent was also issued more than 1 year and 1 day prior to the applicant's filing date of **December 12th 2003**, therefore it constitutes prior art under **35 U.S.C. 102(b)**.

22. With respect to **Claim 1, Su et al.**, teaches and shows "An apparatus" [See figure 13] "comprising: a current-carrying element with a first region carrying a first current;" [See figure 1 component 1a or 1c, with directional current i indicated by the arrow] "a second region adjacent to said first region;" [See figure 1 component 1b or 1d] "said second region carrying a second current;" [See figure 1 component 1b with directional current i indicated by the direction arrows] **Su et al.**, shows "said second current differing from said first current where adjacent;" [See figure 1] "and a magnetic resonance imaging machine." [See figure 13. See also the text of the abstract, col. 1 line 6 through col. 12 line 60 and figures 1, 3a, 3b, 5, and 8].

23. With respect to **Claim 2, Su et al.**, teaches and shows "said second region is separated from said first region by a planar interface;" [See figure 3b where component 2 represents the planar interface; col. 5 lines 50-61; col. 6 line 38 through col. 8 line 54] "and said first and second regions being mirror images in said planar interface". [See figure 3b, abstract] The same reasons for rejection, that apply to **claim 1** also apply to **claim 2** and need not be reiterated.

24. With respect to **Claim 3, Su et al.**, teaches and shows that "said first current has a first direction; said second current has a second direction; and said second direction is

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opposite said first direction". [See figures 1, 3a, 3b, 5; col. 5 lines 50-61; col. 6 line 38 through col. 8 line 54; abstract] The same reasons for rejection, that apply to **claim 1** also apply to **claim 3** and need not be reiterated.

25. With respect to **Claim 4**, **Su et al.**, teaches and shows "wherein an opposite of said second current being a mirror image of said first current in said planar interface". [See figure 3b col. 8 lines 1-54] The same reasons for rejection, which apply to claims 1, 2 also apply to **claim 4** and need not be reiterated.

26. With respect to **Claim 5**, **Su et al.**, shows from figures 2a-2e, and teaches from col. 5 line 2 through col. 12 line 60, that "said first region carries a first volume current density;" **Su et al.**, shows "said first region has a first thickness;" [See figures 1, 3b] **Su et al.**, teaches and shows "said first region carries a first current density, comprising said first volume current density integrated over said first thickness of said first region; and "said first current density is constant over said first region". [See figures 1, 2a-2e, 3b; col. 5 line 2 through col. 12 line 60] The same reasons for rejection, that apply to **claims 1, 2, 4** also apply to **claim 5** and need not be reiterated.

27. With respect to **Claim 6**, **Su et al.**, teaches and shows "a support surface". [See components 1c, and 1d, which comprise the support surface structure for components 1a and 1b in figure 1; and support surface 1 of figure 3b; See also col. 6 line 38 through col. 8 line 54.] The same reasons for rejection, that apply to **claim 1**, also apply to **claim 6** and need not be reiterated.

28. With respect to **Claim 7**, **Su et al.**, shows "said first and second regions pass under" / over (i.e. via rotation of figures 1, or 3b) "and conform to said support surface". [See figures 1, 3b] The same reasons for rejection, which apply to claims 1, 6 also apply to **claim 7** and need not be reiterated.

29. With respect to **Claim 8**, **Su et al.**, shows that "said support surface is flat". [See support surface 1 of figure 3b] The same reasons for rejection, that apply to **claims 1, 6, 7** also apply to **claim 8** and need not be reiterated.

30. With respect to **Claim 9**, **Su et al.**, teaches and shows "said current-carrying element has cross-section comprising an arc of a circle". [See figures 1, 3a, 3b, 5, 8;

col. 1 line 6 through col. 12 line 60, abstract] The same reasons for rejection, that apply to **claims 1, 6, 7, 8** also apply to **claim 9** and need not be reiterated.

31. **Claims 1-9** are rejected under **35 U.S.C. 102(b)** as being anticipated by **Mansfield et al.**, US patent **4,978920** issued **December 18th 1990**.

32. With respect to **Claim 1**, **Mansfield et al.**, teaches and shows "An apparatus comprising: a current-carrying element" [See figures 19, 25, 15] "with a first region carrying a first current; a second region adjacent to said first region; said second region carrying a second current;" [See figures 19, 25, 15] "said second current differing from said first current where adjacent;" [See figures 19, 25, 15] "and a magnetic resonance imaging machine." [See col. 1 line 4 through col. 3 line 10]

33. With respect to **Claim 2**, **Mansfield et al.**, shows "said second region is separated from said first region by a planar interface;" [See figures 19, 25, 15] "and said first and second regions being mirror images in said planar interface". [See figures 19, 25, 1, 15] The same reasons for rejection, that apply to **claim 1** also apply to **claim 2** and need not be reiterated.

34. With respect to **Claim 3**, **Mansfield et al.**, shows that "said first current has a first direction; said second current has a second direction; and said second direction is opposite said first direction". [See figures 19, 25, 15] The same reasons for rejection, that apply to **claim 1** also apply to **claim 3** and need not be reiterated.

35. With respect to **Claim 4**, **Mansfield et al.**, shows "wherein an opposite of said second current being a mirror image of said first current in said planar interface". [See figures 19, 25, 15] "The same reasons for rejection, that apply to **claims 1, 2** also apply to **claim 4** and need not be reiterated.

36. With respect to **Claim 5**, **Mansfield et al.**, teaches and shows "said first region carries a first volume current density; said first region has a first thickness; said first region carries a first current density, comprising said first volume current density integrated over said first thickness of said first region; and said first current density is constant over said first region". [See col. 3 lines 32 through col. 21 line 2; figures 19, 25, 15] The same reasons for rejection, that apply to **claims 1, 2, 4** also apply to **claim 5** and need not be reiterated.

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37. With respect to **Claim 6, Mansfield et al.**, shows "a support surface". [See figures 19, 25, 15] The same reasons for rejection, that apply to **claim 1**, also apply to **claim 6** and need not be reiterated.

38. With respect to **Claim 7, Mansfield et al.**, shows "said first and second regions pass under and conform to said support surface". [See figures 19, 25, and 37b in combination] The same reasons for rejection, which apply to claims 1, 6 also apply to **claim 7** and need not be reiterated.

39. With respect to **Claim 8, Mansfield et al.**, shows "aid support surface is flat". [See figure 15] The same reasons for rejection, that apply to **claims 1, 6, 7** also apply to **claim 8** and need not be reiterated.

40. With respect to **Claim 9, Mansfield et al.**, shows "said current-carrying element has cross-section comprising an arc of a circle". [See figures 19, 25] The same reasons for rejection, that apply to **claims 1, 6, 7, 8** also apply to **claim 9** and need not be reiterated.

Prior art of Record

41. The **prior art made of record** and not relied upon is considered pertinent to applicant's disclosure. See all of the references cited on the notice of references cited form PT0-892 attached to this office action. The examiner notes that each of these references meets the limitations of the claims as currently set forth.

42. Applicant please also note that **Molyneaux et al.**, US patent **6,836,118 B2** which issued December 28th 2004 is **prior art under 102 (e)** because the **Molyneaux et al.**, filing date of March 10th 2000 is before applicant's filing date of 12/12/2003. [See particularly figures **15c, 9B** and **16A.**]

Pro-Se applicant (i.e. application by inventor)

43. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon

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skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

44. Applicant is advised of the availability of the publication "**Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office.**" This publication is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Helpful Information for Pro-Se Applicants

45. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

46. As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if

the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are

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solved by the applicant's invention. This item may also be titled "Background Art."

- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the

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applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Replying to Office actions

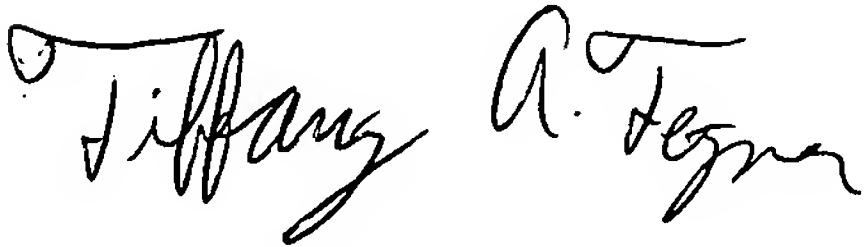
47. In responding to this office action applicant should:
- A)** File an Official reply to the Official Fax number provided at the end of this action.
 - B)** Respond to all issues raised by the examiner.
 - C)** Include the application serial number **10/707,434** on all pages, include the filed date of 12/12/2003, the examiner's name (i.e. **Tiffany Fetzner**) with the examiner's art unit / Group number (i.e. **2859**) on the front page along with a listing of what papers are being filed with the response.
 - D)** Submit any arguments under the heading "Remarks" pointing out disagreements with the examiner's contentions. Applicant must also discuss each of the references applied against the claims, explaining how the claims avoid the references or distinguish from them, without adding new matter. Only information found in the original specification disclosure can be relied upon in making an amendment (i.e. a correction) to the original claims.
 - E)** Contact the examiner if necessary.

Conclusion

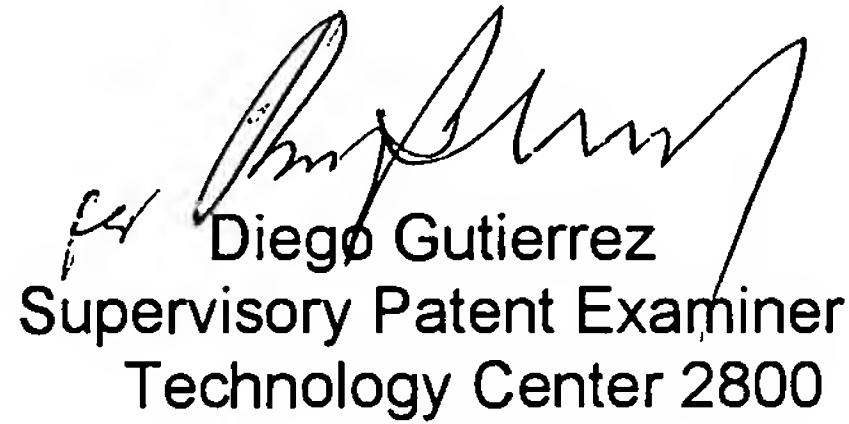
48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tiffany Fetzner whose telephone number is: (571) 272-2241. The examiner can normally be reached on Monday-Thursday from 6:00am to 3:30pm., and on alternate Friday's from 6:00am to 3:30pm.

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49. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez, can be reached at (571) 272-2245. The **only official fax phone number** for the organization where this application or proceeding is assigned is **(703) 872-9306**.



TAF
February 20, 2005



for Diego Gutierrez
Supervisory Patent Examiner
Technology Center 2800